The Evening Sky Map

FREE* EACH MONTH FOR YOU TO EXPLORE, LEARN & ENJOY THE NIGHT SKY

SOUTHERN HEMISPHERE
FEBRUARY 2022

Sky Calendar – February 2022

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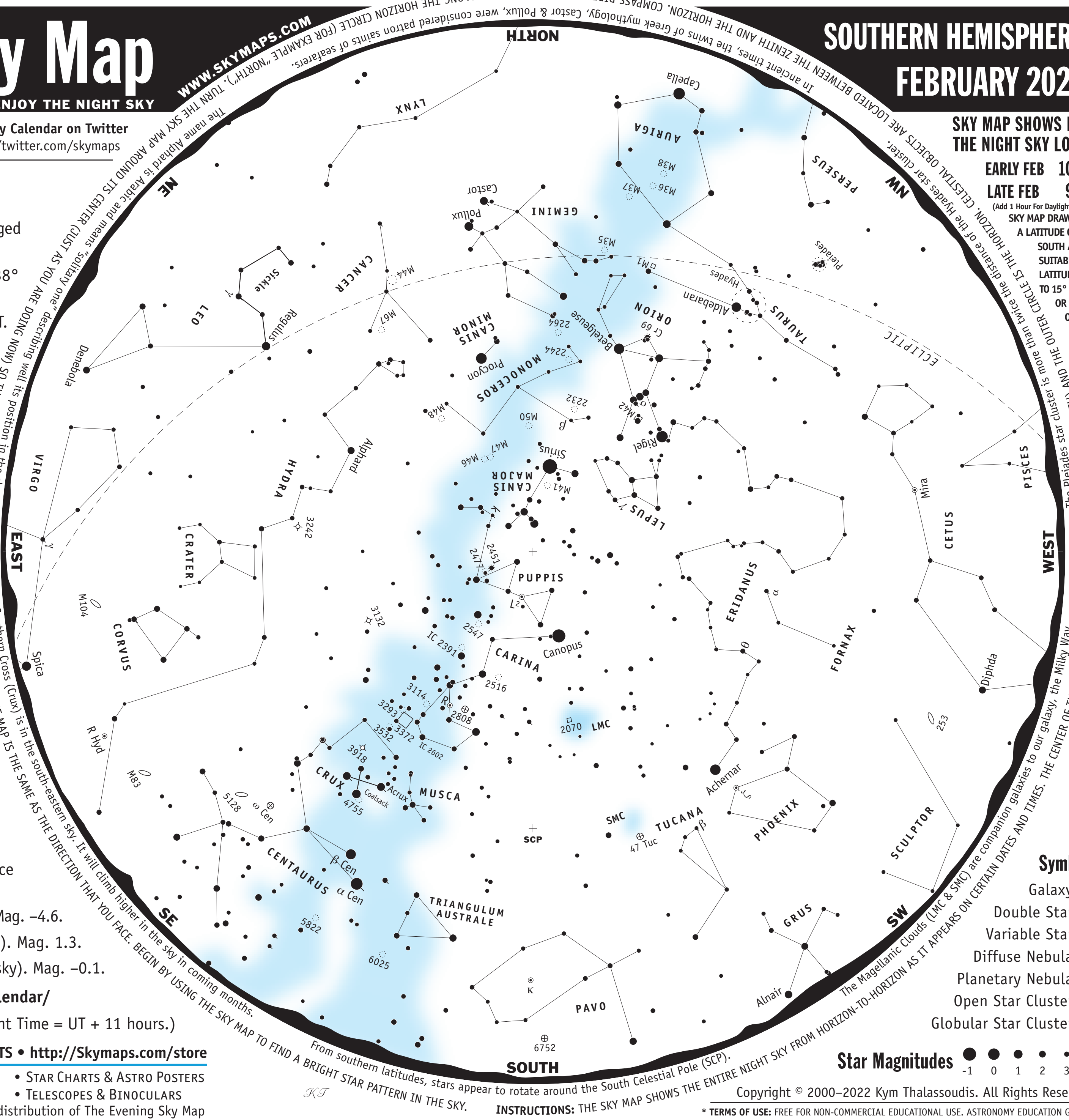
1 **New Moon** at 5:48 UT. Start of lunation 1226.
3 **Moon near Jupiter** at 1h UT (evening sky). Mag. −2.0.
4 **Saturn at conjunction** with the Sun at 19h UT. The ringed planet (not visible) passes into the morning sky.
5 **Mars 0.2° from M22** (globular star cluster) at 9h UT (38° from Sun, morning sky). Mags. 1.4 and 5.2.
7 **Moon near Uranus** (82° from Sun, evening sky) at 21h UT. Occultation visible from Antarctica. Mag. +5.8.
8 **First Quarter Moon** at 13:51 UT.
9 **Moon near the Pleiades** at 12h UT (evening sky).
9 **Venus at its brightest** at 14h UT. Mag. −4.7.
10 **Moon near Aldebaran** at 7h UT (evening sky).
11 **Moon at apogee** (farthest from Earth) at 3h UT (distance 404,897 km; angular size 29.5').
12 **Moon near M35 star cluster** at 5h UT (evening sky).
12 **Venus shows greatest illuminated extent** (337 square arc seconds) at 22h UT. Mag. −4.6
13 **Moon near Castor** at 18h UT (evening sky).
14 **Moon near Pollux** at 0h UT (evening sky).
15 **Moon near Beehive cluster M44** at 3h UT (evening sky).
16 **Full Moon** at 16:58 UT.
16 **Mercury at greatest elongation west** at 21h UT (26° from Sun, morning sky). Mag. 0.0.
16 **Moon near Regulus** at 22h UT (midnight sky).
21 **Moon near Spica** at 0h UT (morning sky).
23 **Last Quarter Moon** at 22:33 UT.
24 **Moon near Antares** at 8h UT (morning sky).
26 **Moon at perigee** (closest to Earth) at 22:39 UT (distance 367,789km; angular size 32.5').
27 **Moon near Venus** at 7h UT (47° from Sun, morning sky). Mag. −4.6.
27 **Moon near Mars** at 11h UT (44° from Sun, morning sky). Mag. 1.3.
28 **Moon near Mercury** at 23h UT (24° from Sun, morning sky). Mag. −0.1.

More sky events and links at http://Skymaps.com/skycalendar/

All times in Universal Time (UT). (Australian Eastern Daylight Time = UT + 11 hours.)



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NORTH
NE
EAST
SE
SOUTH
SW
WEST
NW
LYNX
AURIGA
Capella
M38
M37
M36
PERSEUS
GEMINI
Castor
Pollux
M35
M1
Pleiades
Hyades
Aldebaran
TAURUS
ECLIPTIC
CANCER
M44
M67
Sickle
γ
LEO
Regulus
Denebola
CANIS MINOR
Procyon
2264
ORION
Betelgeuse
Cr 69
MONOCEROS
2244
2232
M42
Rigel
M50
M48
Alphard
HYDRA
M47
M46
Sirius
CANIS MAJOR
M41
LEPUS
γ
VIRGO
γ
CRATER
3242
PUPPIS
2451
2477
L²
ERIDANUS
θ
CETUS
Mira
PISCES
M104
CORVUS
Spica
3132
2547
IC 2391
CARINA
Canopus
2516
FORNAX
Diphda
R Hyd
M83
3114
R
2808
3293
3372
3532
IC 2602
2070
LMC
253
3918
CRUX
Acrux
Coalsack
4755
MUSCA
Achernar
ζ
PHOENIX
5128
ω Cen
CENTAURUS
β Cen
α Cen
SMC
47 Tuc
TUCANA
β
SCP
SCULPTOR
TRIANGULUM AUSTRALE
5822
6025
κ
PAVO
GRUS
Alnair
6752

In ancient times, the twins of Greek mythology, Castor & Pollux, were considered patron saints of seafarers.

The name Alphard is Arabic and means „solitary one" describing well its position in the sky.

The Southern Cross (Crux) is in the south-eastern sky. It will climb higher in the sky in coming months.

From southern latitudes, stars appear to rotate around the South Celestial Pole (SCP).

The Magellanic Clouds (LMC & SMC) are companion galaxies to our galaxy, the Milky Way.

The Pleiades star cluster is more than twice the distance of the Hyades star cluster.

INSTRUCTIONS: THE SKY MAP SHOWS THE ENTIRE NIGHT SKY FROM HORIZON-TO-HORIZON AS IT APPEARS ON CERTAIN DATES AND TIMES. THE CENTER OF THE MAP IS THE PART OF THE SKY DIRECTLY OVERHEAD (ZENITH) AND THE OUTER CIRCLE IS THE HORIZON. CELESTIAL OBJECTS ARE LOCATED BETWEEN THE ZENITH AND THE HORIZON. COMPASS DIRECTIONS ARE INDICATED ALONG THE HORIZON CIRCLE (FOR EXAMPLE „NORTH"). TURN THE SKY MAP AROUND ITS CENTER (JUST AS YOU ARE DOING NOW) SO THE COMPASS DIRECTION THAT APPEARS ALONG THE BOTTOM OF THE MAP IS THE SAME AS THE DIRECTION THAT YOU FACE. BEGIN BY USING THE SKY MAP TO FIND A BRIGHT STAR PATTERN IN THE SKY.

KT

SKY MAP SHOWS HOW THE NIGHT SKY LOOKS

EARLY FEB	10 PM
LATE FEB	9 PM

(Add 1 Hour For Daylight Saving)
SKY MAP DRAWN FOR A LATITUDE OF 35° SOUTH AND IS SUITABLE FOR LATITUDES UP TO 15° NORTH OR SOUTH OF THIS

Symbols

Galaxy	⬯
Double Star	●
Variable Star	⊙
Diffuse Nebula	□
Planetary Nebula	⌖
Open Star Cluster	◌
Globular Star Cluster	⊕

Star Magnitudes

●	●	●	•	•	·
-1	0	1	2	3	4

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CELESTIAL OBJECTS

SOUTHERN HEMISPHERE FEBRUARY 2022

About the Celestial Objects

Listed on this page are several of the brighter, more interesting celestial objects visible in the evening sky this month (refer to the monthly sky map). The objects are grouped into three categories. Those that can be easily seen with the naked eye (that is, without optical aid), those easily seen with binoculars, and those requiring a telescope to be appreciated. **Note, all of the objects (except single stars) will appear more impressive when viewed through a telescope or very large binoculars.** They are grouped in this way to highlight objects that can be seen using the optical equipment that may be available to the star gazer.

Tips for Observing the Night Sky

When observing the night sky, and in particular deep-sky objects such as star clusters, nebulae, and galaxies, it's always best to observe from a dark location. Avoid direct light from street lights and other sources. If possible observe from a dark location away from the light pollution that surrounds many of today's large cities.

You will see more stars after your eyes adapt to the darkness—usually about 10 to 20 minutes after you go outside. Also, if you need to use a torch to view the sky map, cover the light bulb with red cellophane. This will preserve your dark vision.

Finally, even though the Moon is one of the most stunning objects to view through a telescope, its light is so bright that it brightens the sky and makes many of the fainter objects very difficult to see. So try to observe the evening sky on moonless nights around either New Moon or Last Quarter.

Astronomical Glossary

Conjunction – An alignment of two celestial bodies such that they present the least angular separation as viewed from Earth.

Constellation – A defined area of the sky containing a star pattern.

Diffuse Nebula – A cloud of gas illuminated by nearby stars.

Double Star – Two stars that appear close to each other in the sky; either linked by gravity so that they orbit each other (binary star) or lying at different distances from Earth (optical double). Apparent separation of stars is given in seconds of arc (").

Ecliptic – The path of the Sun's center on the celestial sphere as seen from Earth.

Elongation – The angular separation of two celestial bodies. For Mercury and Venus the greatest elongation occurs when they are at their most angular distance from the Sun as viewed from Earth.

Galaxy – A mass of up to several billion stars held together by gravity.

Globular Star Cluster – A ball-shaped group of several thousand old stars.

Light Year (ly) – The distance a beam of light travels at 300,000 km/sec in one year.

Magnitude – The brightness of a celestial object as it appears in the sky.

Open Star Cluster – A group of tens or hundreds of relatively young stars.

Opposition – When a celestial body is opposite the Sun in the sky.

Planetary Nebula – The remnants of a shell of gas blown off by a star.

Universal Time (UT) – A time system used by astronomers. Also known as Greenwich Mean Time. Australian Eastern Standard Time (Sydney, Australia) is UT plus 10 hours.

Variable Star – A star that changes brightness over a period of time.

Easily Seen with the Naked Eye

Sirius	CMa	●	The brightest star in the sky. Also known as the "Dog Star". Dist=8.6 ly.
Procyon	CMi	●	Greek name meaning "before the dog" - rises before Sirius (northern latitudes). Dist=11.4 ly.
Canopus	Car	●	Second brightest star in the sky. 14,000 times more luminous than the Sun. Dist=309 ly.
β Centauri	Cen	●	With Alpha Centauri, forms the so-called "Pointers-to-the-Cross". Dist=525 ly.
α Centauri	Cen	●	Nearest bright star to Sun at 4.4 ly. Brilliant double star in a telescope. 80 year period.
Achernar	Eri	●	Brightest star in Eridanus, The River. Arabic name meaning "end of river". Dist=140 ly.
Castor	Gem	●	Multiple star system with 6 components. 3 stars visible in telescope. Dist=52 ly.
Pollux	Gem	●	With Castor, the twin sons of Leda in classical mythology. Dist=34 ly.
Regulus	Leo	●	Brightest star in Leo. A blue-white star with at least 1 companion. Dist=77 ly.
Rigel	Ori	●	The brightest star in Orion. Blue supergiant star with mag 7 companion. Dist=770 ly.
Betelgeuse	Ori	●	One of the largest red supergiant stars known. Diameter=300 times that of Sun. Dist=430 ly.
Pleiades	Tau	◌	The Seven Sisters. Spectacular cluster. Many more stars visible in binoculars. Dist=399 ly.
Hyades	Tau	◌	Large V-shaped star cluster. Binoculars reveal many more stars. Dist=152 ly.
Aldebaran	Tau	●	Brightest star in Taurus. It is not associated with the Hyades star cluster. Dist=65 ly.

Easily Seen with Binoculars

M44	Cnc	◌	Praesepe or Beehive Cluster. Visible to the naked eye. Dist=577 ly.
M41	CMa	◌	First recorded observation by Aristotle in 325 BC as "cloudy spot". Dist=2,300 ly.
2516	Car	◌	Spectacular open star cluster of 100 stars spaning 1/2 deg. Dist=1,300 ly.
2808	Car	⊕	Located 4 deg W of Nu Carinae. Visible to the naked eye on clear nights.
3114	Car	◌	Stunning open cluster. 30+ stars visible through 7x binoculars. Dist=2,900 ly.
3293	Car	◌	Rich, tightly packed. Surrounded by large, faint nebulosity. Dist=8,500 ly.
IC 2602	Car	◌	The "Five of Diamonds". Bright cluster twice diameter of full Moon. Dist=491 ly.
3372	Car	□	Eta Carinae Nebula. Enormous glowing cloud in rich star field. Dist=8,000 ly.
3532	Car	◌	Herschel - "most brilliant cluster". 60+ stars in 7x binoculars. Dist=1,300 ly.
ω Centauri	Cen	⊕	Largest and brightest globular star cluster in sky. 1 million stars. Dist=17,000 ly.
4755	Cru	◌	Jewel Box. Outstanding star cluster. Many contrasting colours. Dist=7,600 ly.
LMC	Dor	⊘	Large Magellanic Cloud. A neighbouring galaxy of the Milky Way. Dist=180,000 ly.
M35	Gem	◌	Fine open cluster located near foot of the twin Castor. Dist=2,800 ly.
γ Leporis	Lep	●	Visible with binoculars. Gold & white stars. Mags 3.6 & 6.2. Dist=30 ly. Sep=96.3".
2232	Mon	◌	A large scattered star cluster of 20 stars. Dist=1,300 ly.
2244	Mon	◌	Surrounded by the rather faint Rosette Nebula. Dist=5,540 ly.
M50	Mon	◌	Visible with binoculars. Telescope reveals individual stars. Dist=3,000 ly.
M42	Ori	□	The Great Orion Nebula. Spectacular bright nebula. Best in telescope. Dist=1,300 light years.
L^2	Pup	⊙	Semi-regular variable. Magnitude varies between 2.6 & 6.2 over 140.42 days.
M47	Pup	◌	Bright star cluster. 15+ stars in 7x binoculars. Dist=1,500 ly.
M46	Pup	◌	Dist=5,400 ly. Contains planetary NGC 2438 (Mag 11, d=65") - not associated.
2451	Pup	◌	30+ stars in binoculars. The brightest star, c Puppis, is red. Dist=850 ly.
2477	Pup	◌	Very rich but distant star cluster (4,200 ly). Resembles globular through binoculars.
47 Tucanae	Tuc	⊕	Spectacular object. Telescope will reveal stars. Near edge of SMC. Dist=15,000 ly.
β Tucanae	Tuc	●	Complex multiple star. Binoculars show one pair. Telescope required to split primary star.
SMC	Tuc	⊘	Small Magellanic Cloud. Companion galaxy to Milky Way. Requires dark sky. Dist=210,000 ly.
2547	Vel	◌	Fine open cluster visible through binoculars. Dist=1,300 ly.
IC 2391	Vel	◌	Omicron Velorum Cluster. Superb object for binoculars. Dist=450 ly.

Telescopic Objects

M67	Cnc	◌	Contains 500+ stars mag 10 & fainter. One of the oldest clusters. Dist=2,350 ly.
3918	Cen	⌖	The Blue Planetary. Visible in a small telescope as a round blue disk.
2070	Dor	□	Tarantula Nebula. A bright nebula located in LMC. A star-forming region.
θ Eridani	Eri	●	Striking blue-white double star. Mags 3.2 & 4.3. Visible in a small telescope. Sep=8.2".
3242	Hya	⌖	Ghost of Jupiter. Bright blue disk. Mag 11 central star. Dist=2,600 ly.
β Monocerotis	Mon	●	Triple star. Mags 4.6, 5.0 & 5.4. Requires telescope to view arc-shape. Sep=7.3".
2264	Mon	◌	Christmas Tree Cluster. Associated with the Cone Nebula. Dist=2,450 ly.
σ Orionis	Ori	●	Superb multiple star. 2 mag 7 stars one side, mag 9 star on other. Struve 761 triple in field.
k Puppis	Pup	●	Telescope easily shows two blue-white stars of almost equal brightness. Sep=9.9".
M1	Tau	□	Crab Nebula. Remnant from supernova which was visible in 1054. Dist=6,500 ly.
3132	Vel	⌖	One of the brightest planetaries. Magnitude 10 central star. Dist=2,600 ly.

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